

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Bill Nye the Science Guy - Motion

*While watching the movie answer the following questions.*

1. Everything in the universe is in \_\_\_\_\_.
2. If a scooter is placed on an air track, will the scooter move on its own? YES or NO
3. If something is moving, it keeps on moving unless acted on by an outside \_\_\_\_\_.
4. Inertia is a property of \_\_\_\_\_.
5. During the nifty home experiment, a playing card was placed on top of a glass and then a quarter was placed on top of the card. When the card was pushed, the quarter fell into the glass. Why did the quarter fall into the glass? \_\_\_\_\_

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6. Newton's first law states: things at rest \_\_\_\_\_ at rest and things in motion \_\_\_\_\_ in motion unless acted on by an outside force.
  7. Newton's second law states: to move a mass, you need a \_\_\_\_\_.
  8. In the formula  $F=ma$ , "F" means \_\_\_\_\_, "m" means \_\_\_\_\_ and "a" means \_\_\_\_\_.
  9. Newton's third law states, for every action there is an equal and opposite \_\_\_\_\_.
  10. To have motion, it takes motion. You are either going to \_\_\_\_\_ or \_\_\_\_\_.
  11. Mass is measured in \_\_\_\_\_ or kilograms.
  12. In zero gravity, do the laws of motion still apply? YES or NO